IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPEAL BRIEF FOR THE APPELLANT

Ex parte Yuji TAKAHASHI et al. (Applicant)

TOUCH PANEL DEVICE AND CONTACT POSITION DETECTION METHOD

Application Number: 10/696,037

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Appeal No.:

Art Unit: 2629

Examiner: Jennifer T. Nguyen

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BRIEF ON APPEAL

I. REAL PARTY IN INTEREST

The real party in interest is **FUJITSU LIMITED**, by an assignment recorded in the U. S. Patent and Trademark Office on **October 30, 2003**, at Reel **014651**, Frame **0755**.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to appellant, appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1, 2 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over ***Sullivan*** (US 2004/0160421) in view of ***Ross-Messemer*** (US 6,885,491).

Claims 3-12 are withdrawn from consideration.

Claims 1, 2 and 13 are the subject of this appeal.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection dated February 11, 2009.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claims 1 and 13 are the only independent claims involved in this appeal. The claimed subject matter as recited in the independent claims is:

1. A touch panel device having at least one pair of excitation section (3, 12) for exciting surface acoustic waves by application of burst waves (*e.g.*, specification, page 23, lines 3-12), and receiving section (4, 13) for receiving surface acoustic waves, which are arranged to face each other on a substrate (11) capable of propagating surface acoustic waves, for propagating surface acoustic waves between said excitation section and said receiving section on said substrate (specification, page 21, line 17 to page 22, line 5), and detecting a position of an object in contact with said substrate (specification, page 22, lines 5-11), based on received results by said receiving section, said touch panel device comprising:

a measuring section for measuring strength of surface acoustic waves received by said receiving section (specification, page 23, lines 9-12); and

a control section (5) for controlling a number of waves of the burst waves to be applied to said excitation section (specification, page 19, lines 1-11), based on the strength of surface acoustic waves measured by said measuring section (specification, page 22, lines 12-18).

13. A contact position detection method in which at least one pair of excitation section (3, 12) for exciting surface acoustic waves by application of burst waves (*e.g.*, specification, page

23, lines 3-12), and receiving section (4, 13) for receiving surface acoustic waves are arranged to face each other on a substrate capable of propagating surface acoustic waves, the surface acoustic waves are propagated between said excitation section and said receiving section on said substrate (specification, page 23, lines 3-12), and a position of an object in contact with said substrate is detected based on received results by said receiving section (specification, page 22, lines 5-11), said method comprising:

measuring strength of surface acoustic waves received by said receiving section (specification, page 23, lines 9-12); and

controlling a number of waves of the burst waves to be applied to said excitation section, based on the measured strength of surface acoustic waves (specification, page 23, lines 9-22).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are whether claims 1, 2 and 13 are unpatentable under 35 U.S.C. § 103(a) as being obvious over *Sullivan* in view of *Ross-Messemer*.

VII. ARGUMENT

A. REJECTION UNDER 35 U.S.C. § 103(a) AS BEING OBVIOUS OVER *SULLIVAN* IN VIEW OF *ROSS-MESSEMER*

It is respectfully requested that the rejection of claims 1, 2 and 13 under 35 U.S.C. § 103(a) as being obvious over *Sullivan* in view of *Ross-Messemer*, be withdrawn, since the combination of references does not teach all of the elements as recited in independent claims 1 and 13 and these elements or method steps would not have been obvious.

The Office Action dated February 11, 2009 finally rejects claims 1, 2 and 13 under 35 U.S.C. § 103(a) as being unpatentable over *Sullivan* in view of *Ross-Messemer*. Thus, it is the position of the Examiner that *Sullivan* in view of *Ross-Messemer* teaches the following features or that these features would have been obvious:

> [an] excitation section for exciting surface acoustic waves by application of burst waves; [and]
>
> a control section for controlling a number of waves of the burst waves to be applied to said excitation section

as recited in claim 1; and

> [an] excitation section for exciting surface acoustic waves by application of burst waves; [and]
>
> controlling a number of waves of the burst waves to be applied to said excitation section

as recited in claim 13.

It is respectfully submitted that the above features of claims 1 and 13 are not disclosed in *Sullivan* or *Ross-Messemer*, either explicitly or inherently, and that these features would not have been obvious.

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. *Graham* v. *John Deere Co. of Kansas City*, 383 U.S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966). Based on these factual considerations, the obviousness or non-obviousness of the claimed subject matter is determined. *Id.*; *KSR Int'l Co. v. Teleflex*, 127 S. Ct. 1727, 167 L. Ed. 2d 705, 715, 82 USPQ2d 1385 (2007). Thus, if the Examiner's understanding of the scope and content of the prior art is incorrect, then it follows that a conclusion of obviousness based on this misunderstanding is improper.

1. *Sullivan* in view of *Ross-Messemer* does not teach an excitation section for exciting surface acoustic waves by application of burst waves

It is respectfully submitted that *Sullivan* in view of *Ross-Messemer* does not disclose, either explicitly or inherently, an "excitation section for exciting surface acoustic waves by application of burst waves" as recited in claims 1 and 13, and that this feature would not have been obvious.

The Examiner cites *Sullivan* for teaching an excitation section for exciting surface acoustic waves by application of burst waves citing transducer 31. (Office Action, page 2.) *Sullivan* discloses an emitting transducer 31 that excites bending wave vibration in panel 24.

(Paragraph 112.) However, *Sullivan* is silent regarding whether the emitting transducer 31 applies burst waves.

Ross-Messemer discloses the use of standing surface waves. *Ross-Messemer* describes that its "invention is distinguished in that the radiation-diffracting grating structure is provided...by standing surface waves." (Col. 7, lines 47-50.) For generating standing surface waves on substrates of *Ross-Messemer*, an excitation element (*e.g.*, the surface wave source 47 in Fig. 2 of *Ross-Messemer*) provides continuous surface waves and not burst-like surface waves. Accordingly, continuous waves for excitation, not burst waves, are applied also to the excitation element itself.

The Examiner takes the position that *Sullivan* teaches the use of burst waves because *Sullivan* teaches measuring the signal with passage of time. (Office Action, page 3.) Applicants respectfully submit that measuring waves over periods of time as disclosed in *Sullivan* does not make a wave a burst wave. A burst wave has a discrete number of bursts at a certain frequency. This discrete number of bursts is referred to as the wave number of the burst wave. (*See, e.g.*, specification, page 19, lines 4-7; page 22, line 22 to page 23, line 5.)

Sullivan in view of *Ross-Messemer* does not teach an "excitation section for exciting surface acoustic waves by application of burst waves" as recited in claim 1 and similarly recited in claim 13. Therefore, claims 1 and 13 are non-obvious over *Sullivan* in view of *Ross-Messemer*.

2. *Sullivan* in view of *Ross-Messemer* does not teach a control section for controlling a number of waves of the burst waves to be applied to said excitation section

It is respectfully submitted that *Sullivan* in view of *Ross-Messemer* does not disclose, either explicitly or inherently, "a control section for controlling a number of waves of the burst waves to be applied to said excitation section" as recited in claim 1 and the method step as recited in claim 13, and that this feature would not have been obvious.

The Examiner appears to acknowledge that *Sullivan* does not disclose a control section as recited in the claims and cites *Ross-Messemer* for disclosing a control section. (Office Action, page 3.) *Ross-Messemer* discloses a control means for adjusting the frequency for exciting the surface wave source in response to a measuring signal of the surface wave receiver. (Col. 4, lines 28-31.) *Ross-Messemer* does not disclose controlling the number of waves of a burst wave, and the Examiner acknowledges that the combination of *Sullivan* and *Ross-Messemer* does not "specifically" teach "a control section for controlling a number of waves of the burst waves to be applied to said excitation section." (Office Action, page 3.)

However, the Examiner takes the position that *Sullivan* in view of *Ross-Messemer* teaches "a control section for controlling the wave number of the burst wave to be applied to said excitation section" as recited in claim 1 and similarly recited in claim 13 because: **(1)** *Sullivan* teaches measuring the signal with passage of time, and thus, teaches a burst wave in a period of time; and **(2)** *Ross-Messemer* teaches that the frequency of a signal is mathematically related to the wavelength and wave number. (Office Action, page 3).

Thus, it appears to be the position of the Examiner that the control section as recited in the claims is not explicitly disclosed in the combination of *Sullivan* and *Ross-Messemer*, but that it is inherent in the combination of *Sullivan* and *Ross-Messemer*.

Regarding assertion (1) by the Examiner, neither reference teaches the use of burst waves, as noted above, and thus, it would not have been obvious to control the number of waves of burst waves.

Regarding assertion (2) by the Examiner, the Examiner takes the position that *Ross-Messemer* teaches controlling a number of waves because the frequency of a signal is mathematically related to the wavelength and wave number. (Office Action, page 3.) However, Applicants respectfully submit that just because two different variables are mathematically related does not mean that controlling one variable necessarily controls the other variable. Thus, *Sullivan* in view of *Ross-Messemer* does not teach controlling the number of waves, either expressly or inherently, and it would not have been obvious to one of ordinary skill in the art to control the number of waves merely because the prior art teaches controlling frequency.

VIII. CONCLUSION

In view of the above remarks, Applicants respectfully submit that the rejection of claims 1, 2 and 13 under 35 U.S.C. § 103(a) as being obvious over *Sullivan* in view of *Ross-Messemer* should be withdrawn.

If this paper is not timely filed, appellants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to Deposit Account No. 50-2866, along with any other additional fees that may be required with respect to this paper.

Respectfully submitted,

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IX. CLAIMS APPENDIX

1. A touch panel device having at least one pair of excitation section for exciting surface acoustic waves by application of burst waves and receiving section for receiving surface acoustic waves, which are arranged to face each other on a substrate capable of propagating surface acoustic waves, for propagating surface acoustic waves between said excitation section and said receiving section on said substrate and detecting a position of an object in contact with said substrate, based on received results by said receiving section, said touch panel device comprising:

a measuring section for measuring strength of surface acoustic waves received by said receiving section; and

a control section for controlling a number of waves of the burst waves to be applied to said excitation section, based on the strength of surface acoustic waves measured by said measuring section.

2. The touch panel device of claim 1, wherein

said measuring section measures the strength of surface acoustic waves with the passage of time, and said control section controls the number of the waves of the burst waves, based on a change in strength of the surface acoustic waves with the passage of time which is measured over a predetermined period by said measuring section.

13. A contact position detection method in which at least one pair of excitation section for exciting surface acoustic waves by application of burst waves and receiving section for receiving surface acoustic waves are arranged to face each other on a substrate capable of propagating surface acoustic waves, the surface acoustic waves are propagated between said excitation section and said receiving section on said substrate, and a position of an object in contact with said substrate is detected based on received results by said receiving section, said method comprising:

measuring strength of surface acoustic waves received by said receiving section; and

controlling a number of waves of the burst waves to be applied to said excitation section, based on the measured strength of surface acoustic waves.

X. EVIDENCE APPENDIX

none

XI. RELATED PROCEEDINGS APPENDIX

none